

## ABSTRACT OF THE DISCLOSURE

A field emission display includes: a cathode electrode (17); an anode electrode (20); a gate electrode (19) arranged between the cathode electrode and the anode electrode; a carbon nanotube array (15) electrically connected to the cathode electrode at a first end; and a spacer (14) insulatively separating the gate electrode from the cathode electrode. A second opposite end of the carbon nanotube array is flush with a top end of the spacer. An intermediate layer (11) having a precisely controllable thickness is arranged between the gate electrode and the spacer. The distance between the gate electrode and the carbon nanotube array is mainly controlled by the thickness of the intermediate layer.